July 23, 2004 Draft - Subject to Revision

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CLEVELAND OFFICE
SITE-SPECIFIC SAFETY PLAN
FOR
FIELD ACTIVITIES

Date

I. DESCRIPTION OF FIELD ACTIVITY

Site: Clow Water Systems Company

Location: 2266 South Sixth Street, Coshocton, Ohio

SSSP Prepared By: John Gierczak **Mail Code:** ME-W **Phone:** 440-250-1713

Proposed Dates for Activities: July 27-29 and August 3-5, 2004

Purpose/Objective:

To conduct a multimedia compliance inspection to evaluate facility compliance with federal regulations under the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, Toxic Substances Control Act, Emergency Planning and Community Right-To- Know Act and Comprehensive Environmental Response, Compensation, and Liability Act. Samples of opportunity may be collected as part of the RCRA and TSCA inspection activities.

Background Review: Complete ___ Preliminary X*

* Additional background information will be obtained from the facility at the start of the inspection.

Background Material Attached: Yes ___ No X

Indicate which of the following information source(s) were consulted: State and/or Local Agency, State and or Federal OSHA, NIOSH, EPA files, Site Operator and Local Fire Department.

Federal OSHA inspector, Ohio EPA regulatory personnel and files, and USEPA databases were utilized to prepare for this inspection.

Overall Hazard Summary: Low ___ High ___
Medium ___ Unknown X*

* Additional information will be obtained from the facility at the start and during the inspection to assess the overall hazards.

Route of Exposure: Inhalation X Skin Contact X Ingestion X (slight)

Map or Site Sketch Attached: Yes ___ No X

II. SITE CHARACTERISTICS

A. Facility/Site Description:

Clow Water Systems Company manufactures ductile iron pipe and fittings for conveying potable water. The facility is a ferrous foundry and operates a cupola furnace to melt auto shredder scrap and a small amount of iron scrap; three casting processes, including centrifugal casting operations to form pipe; a process that applies cement to the pipe; a pipe painting line the uses water-based paints; and, a flange shop where pipe fittings are painted with either solvent-based or water-based paint. It also appears there are mold and core making operations and sand handling operations at the facility

B. Hazardous Substance(s) Description

Among other things including heat, noise and physical injuries, such as burns from splashes of molten metal, ferrous iron foundry operations have the potential to give rise to airborne contaminants and gases, including crystalline silica dust and carbon monoxide.

Crystalline silica dust may be generated during foundry sand handling operations. Abrasive blasting processes may also involve the use of sand containing silica. Prolonged exposure to crystalline silica by inhalation may cause silicosis, a fibrosis (scarring) of the lungs which can be progressive and may lead to death. Crystalline silica inhaled from occupational sources is classified by the International Agency for Research on Cancer as class I: carcinogenic to humans. OSHA has established 8-hour time weighted average limits for various types of crystalline silica in 29 CFR 1910.1000.

Carbon monoxide gas is produced in substantial amounts by a variety of furnaces. It may also be released during the pouring of molten metal. The maximum permissible exposure limit (PEL) set by OSHA for carbon monoxide is 50 ppm (55 mg/m^3). This is the limit employees may be exposed to in any OSHA-regulated workplace, averaged over an eight-hour work day. The recommended ceiling exposure limit set by the National Institute for Occupational Safety and Health for carbon monoxide is 200 ppm (229 mg/m^3).

In the production of ductile iron, it is often necessary to add a desulfurizing agent in the melt to produce the desired casting microstructure. One desulfurization agent commonly used is calcium carbide. Calcium carbide has to potential to form flammable and explosive gas and corrosive solid on exposure to moisture.

Foundry air may contain potential irritants such as phenol, furfural alcohol, formaldehyde and various amines. These compounds may be associated with the mold and/or core making operations. The OSHA 8-hour time-weighted average (TWA) PELs for phenol and furfural alcohol are 50 ppm (200 mg/m^3) and 5 ppm (19 (mg/m^3), respectively. The OSHA standard for formaldehyde, is set forth at 29 CFR 1910.1048. The formaldehyde standard includes an 8-hour TWA action level of 0.5ppm, an 8-hour TWA PEL of 0.75 ppm and a 15-minute Short Term Exposure Limit (STEL) of 2 ppm. Employers are required to establish regulated

areas where the concentration of airborne formaldehyde exceeds either the TWA or the STEL and post all entrances and access ways with signs bearing the following information: DANGER FORMALDEHYDE IRRITANT AND POTENTIAL CANCER HAZARD AUTHORIZED PERSONNEL ONLY. The standard also includes requirements for respiratory protection.

Metal fumes may be generated during founding processes, especially during the melting and pouring operations. Iron oxide is the major fume generated in iron and steel operations. The OSHA 8-hour TWA PEL for iron oxide fume 10 mg/m^3.

Based upon discussions with OSHA, there appears to be one or more areas at the facility that are subject to lead regulations at 29 CFR 1910.1025.

C. **Disposal/Storage Methods:** The majority of waste streams generated from the facility's process operations appear to be sent off site. A portion of the foundry sand and cupola furnace slag is disposed of in an on-site landfill designated as Cell 2.

Waste that may be generated from USEPA sampling activities at the facility will be taken to the USEPA, Region 5, Central Regional Laboratory or Cleveland Office for proper management.

D. **Status:** Active X Inactive ___ Unknown ____

E. **History:** (Include accidents or injuries on-site, complaints from public, previous releases and agency reports.)

A federal OSHA inspector familiar with the facility was contacted prior to the inspection to obtain information regarding personnel protective equipment that may be needed for the multimedia inspection. No information regarding injury rates could be obtained from the OSHA inspector. It appears there have been citations associated with the facility's lead program and wet cap and emission tube cleaning operation. It also appears there has been at least one instance of overexposure to silica at the facility's Jolt Line.

F. **Is personal protective equipment required by Facility/Site Management? List equipment and specific areas where required.**

It is anticipated that Clow will require personal protective equipment. Clow may require a hard hat, safety glasses with side shields, hearing protection and steel-toed safety shoes with metatarsal protection on the plant site. Clow may also require respiratory protection in areas where there is a potential for inhalation of silica dust and flame resistant clothing in areas where there is molten metal.

This health and safety plan recommends the following equipment be available for use during the inspection:

- Hard hat
- Safety glasses with side shields
- Ear plugs
- Steel-toed safety shoes with metatarsal protection
- A full or half-face piece respirator with cartridges for protection from dust. (It is not anticipated that there will be any areas where respiratory protection from formaldehyde will be needed).

The inspection team will also be equipped with a cellular telephone in order to contact emergency response personnel if necessary.

- **Are employees working at the facility site monitored for exposure to airborne contaminants? If so, describe situation:** Not known at this time. The facility's safety practices will be discussed with Clow representatives at the start of the multimedia inspection.

- **Do employees working at the facility/site participate in an occupational medical monitoring program? If so, are special biological tests performed or Biologic Limit Values (BLS) used?** Not known at this writing. The facility's safety practices will be discussed with Clow representatives at the start of the multimedia inspection.

- **Describe medical monitoring procedures for evidence of personnel exposure:** Medical monitoring procedures, if any, for facility personnel are not known at this writing. USEPA field personnel participate in an annual medical monitoring program.

- **Is there an on-site emergency alarm system? If so, describe alarm:** Not known. As previously discussed, the inspection team will be equipped with a cellular telephone in order to contact emergency response personnel if necessary.

- **Is there an eyewash/safety shower available on site? If not, explain alternative procedures (where applicable):** Not known. Safety glasses with side shields will be worn during the multimedia inspection.

III. HEALTH AND SAFETY CONSIDERATIONS:

Hazard Assessment[1] (Toxic effects, T.V., odor threshold, reactivity, stability, flammability, and operational hazards with sampling, decontamination, etc.):

Areas of Concern[2]	Hazard Potential[3]	Precautions
Explosion:	Low	Discuss company's current desulfurization operation and use of calcium carbide
Oxygen Deficiency: (e.g. Confined Spaces)	Moderate	Discuss whether company has oxygen and/or carbon monoxide detection equipment prior to the start of the inspection.
Radiation	Low	Discuss whether company has radiation detection equipment for incoming scrap metal and whether there are any operations that use electromagnetic stirring.
Toxic Fumes/Gases:	Moderate	Discuss air monitoring practices used by facility.
Skin/Eye Contact:	Moderate	Inspectors will wear safety glasses with side shields and flame resistant clothing where appropriate. Tyvek suits, gloves and respirators may be worn in the event that samples are collected.
Heat Stress/Cold exposure	Moderate (exposure to heat)	Breaks and liquid intake as necessary.
Falling Objects: (e.g. stacked barrels, etc.)	Moderate	Facility safety practices will be discussed at the start of the inspection and hard hats will be worn in appropriate areas.
Falls (e.g. pits, ponds, elevated work places, etc.)	Moderate	Facility safety practices will be discussed at the start of the inspection.

Confined Spaces (e.g. manholes, vaults, closed rooms, trenches, etc.)	Moderate	Do not anticipate entering confined spaces during the course of this inspection. Should entry into a confined space be deemed necessary, USEPA, Region 5 safety procedures will be followed. Region 5 safety procedures require a confined space permit.

Note 1: Attach copy of Hazardous substance Information Form (Appendix C), Material Safety Data Sheet (MSDS), OHMTADS, Hazardline printouts, etc. (MSDS for crystalline silica and other substances may be requested from company representatives during the inspection.)

Note 2: See Chapter 2 FHSM "Atmospheric Hazard Action Guides."

Note 3: Subjective evaluation (e.g., low, moderate, high, unknown or not applicable)

IV. WORK PLAN INSTRUCTIONS:

A. Level of Protection: A ___ B ___ C _X_ D _X_

Modifications: The concentrations of crystalline silica dust in Clow's foundry air are not known at this writing. Based upon discussions with an OSHA inspector familiar with the facility, a half-face piece respirator with appropriate cartridges should be adequate.

Surveillance Equipment and Materials: N/A

B. Entry Procedures: Standard inspection entry procedures will be used.

C. Field Investigation and Decontamination Procedures: See section discussing decontamination procedures below.

Public Perimeter Identified? N/A Map/Sketch Attached? No.

Team Make-up: EPA _X_ FIT ____ TAT ____ CG ____ STATE _X_
OTHER _____

D. Other Instructions

MMI participants and responsibilities:
John Gierczak, inspection team leader
Sheila Desai, Clean Air Act inspector
Gerald Golubski, Clean Water Act, NPDES inspector

Michael Beedle, RCRA inspector
Robert McCoy, Clean Water Act, SPCC inspector
Cher Salley, Toxic Substances Control Act, PCB inspector

Work Schedule/Limitation: Breaks as needed to minimize exposure to heat stress.

Equipment and Materials/Special Facilities: N/A

Decontamination Procedures (contaminated protective clothing, instruments, equipment, etc.):
Disposable equipment and dedicated precleaned non-disposable equipment will be used only if necessary. This should eliminate the need for any equipment decontamination in the field. In the event that non-disposable equipment is used during this inspection, it will be transported back to the USEPA Cleveland Office where it will be cleaned using Cleveland Office Standard Operating Procedures.

Disposal Procedures (contaminated equipment, supplies, disposal items, wash water, etc.):
PPE /miscellaneous debris will be placed in plastic bags and taken to the USEPA, Region 5, Central Regional Laboratory or Cleveland Office for proper management.

V. EMERGENCY PRECAUTIONS:

A. Nearest Hospital Emergency Room. Note: for remote locations, give directions to hospital and attach map.

Name: Coshocton County Memorial Hospital
Address: 1460 Orange Street, Coshocton, Ohio 43812
Telephone: 740-622-6411

B. Emergency Services (Telephone Numbers) - 911 (all emergency services)

Coshocton County Sheriff's Office
328 Chestnut Street, Coshocton, Ohio
740-622-2411

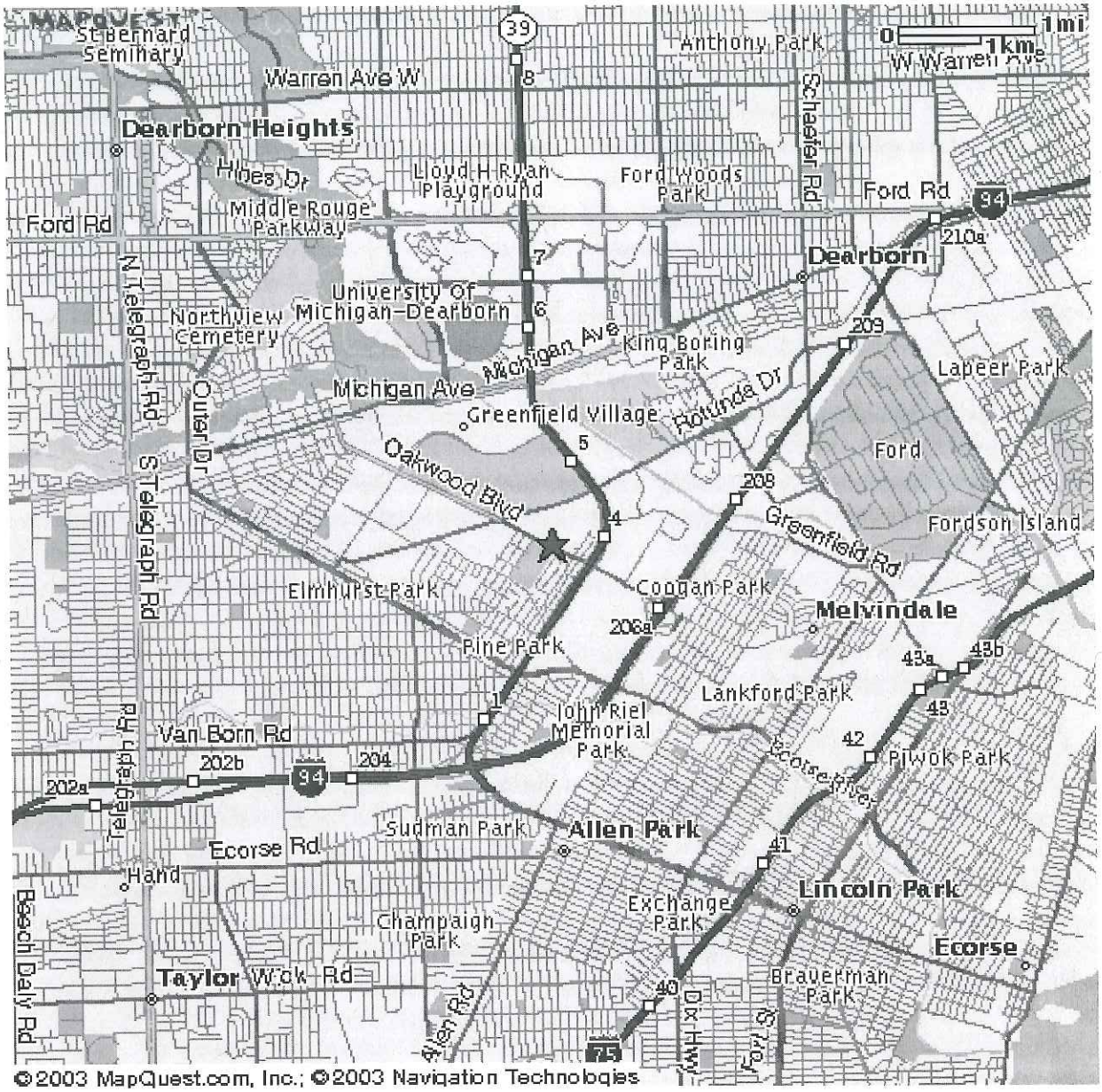
Approvals: **Date:**

CO Project Team Leader: _____ _____

Supervisor: _____ _____

Chairman CO Safety Committee: _____ _____

Area Map with Hospital Location Marked with a red star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Middle Rouge Parkway
Ford Rd
Lloyd H Ryan Playground
Ford Woods Park
Anthony Park
W Warren Ave
Schaefer Rd
Ford Rd
Dearborn
University Of Michigan-Dearborn
Northview Cemetery
N Telegraph Rd
Outer Dr
Michigan Ave
King Boring Park
Lapeer Park
Rotunda Dr
Greenfield Village
Oakwood Blvd
Ford
Fordson Island
Greenfield Rd
Elmhurst Park
Coogan Park
Melvindale
Pine Park
Lankford Park
John Riel Memorial Park
Van Born Rd
Pilwok Park
Ecorse River
Sudman Park
Allen Park
Ecorse Rd
Hand
Lincoln Park
Exchange Park
Champaign Park
Ecorse
Taylor
Wick Rd
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Beech Daly Rd
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